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FEDERAL HIGHWAY ADMINISTRATION'S STEWARDSHIP OF THE RESURFACING, RESTORATION, AND REHABILITATION (3R) OF ROADS OTHER THAN FREEWAYS

(Is Highway Safety Taking a Back Seat?)

REPORT

OF THE

SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT

OF THE

COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION

U.S. HOUSE OF REPRESENTATIVES

SEPTEMBER 1984

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LETTER OF TRANSMITTAL

B-376 RAYBURN BUILDING,
Washington, DC, September 20, 1984.

Hon. JAMES J. HOWARD,
Chairman, Committee on Public Works and Transportation, U.S. House of Representatives, Washington, DC

DEAR MR. CHAIRMAN: The Subcommittee on Investigations and Oversight undertook a review of the Federal Highway Administration's Stewardship of the Resurfacing, Restoration, and Rehabilitation (3R) Program for non-freeway roads after several years of rulemaking efforts had failed to resolve critical issues related to safety and the flexibility of standards for the program.

I am pleased to forward you the attached report which summarizes the results of that effort and contains the subcommittee's conclusions and recommendations.

I believe you will find this report to be informative, objective, and a valuable aid to those who would guide and monitor the effectiveness and safety of this important program, which is a significant departure from traditional highway policy.

With best wishes, I am

Very truly yours,

ELLIOTT H. LEVITAS,
Chairman, Subcommittee on Investigations and Oversight.

FOREWORD

The importance of the Nation's infrastructure to our economic and social well-being has captured national attention in recent years. Much of that attention has been focused on the massive deterioration of our infrastructure which threatens the quality of life in America.

Sewer collector systems, water supply systems, city streets, highways, bridges, and other parts of the infrastructure play a crucial role in our everyday lives. Almost a decade ago, this Committee recognized the serious problems confronting State highway departments across the Nation. We saw that the approach of the design limits of our most modern highways would result in roadway deterioration becoming an increasingly serious problem.

Recognizing that States were unable to fulfill their traditional role of repairing the Nation's highway system led us to initiate a program for improvement of the existing Federal-Aid Highway System. With creation of the Resurfacing, Restoration, and Rehabilitation (3R) Program in the 1976 Federal-Aid Highway Act, the Federal role in new highway construction was expanded to include improvements and repairs.

The Subcommittee on Investigations and Oversight has conducted an in-depth review of the administration by the Federal Highway Administration of the 3R Program for non-freeway roads since passage of the 1976 Act and has prepared this report as a guide to future efforts.

I believe this document will be of invaluable use not only to the Congress, but to the Federal and State agencies concerned with maintaining our road network as the finest in the world.

JAMES J. HOWARD,
Chairman, Committee on
Public Works and Transportation.

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INTRODUCTION

Historically, federal highway funding has been directed toward new construction of roads within the federal-aid system. As highways approached the limits of their design lives, however, roadway deterioration became an increasingly serious problem. Congress shifted the emphasis from new highway construction and route expansion to improvement of existing federal-aid systems by creating the Resurfacing, Restoration and Rehabilitation (3R) program through the 1976 Federal-Aid Highway Act.

This subcommittee held oversight hearings in late 1981 to assess the Federal Highway Administration's (FHWA) stewardship of the 3R program.[1] At issue was FHWA's proposed rulemaking, which would permit heavy non-routine maintenance on federally aided non-freeway roads to be carried out without improving geometric design deficiencies. Our primary concern was the potentially negative impact on highway safety that would occur without minimum geometric design criteria.

The subcommittee was dismayed by FHWA's disregard of Congressional intent in supporting and issuing a rule that had safety as a secondary or optional objective, allowing States to adopt less stringent standards for 3R projects.

This report summarizes our hearings, events prior and subsequent to the hearings and subcommittee recommendations for bringing the 3R program in line with Congressional intent.

ROAD SYSTEMS AND FINANCING

Current requirements for geometric design criteria for non-freeway 3R projects on the federal-aid systems are the product of legislative and regulatory processes that began in the mid-1970s. Highways, originally built to lower design standards, were beginning to deteriorate at an increasing rate and their preservation became a critical concern.

In 1976, Congress included 3R work under the definition of "construction," allowing States to use federal funds for 3R projects for the first time. FHWA initiated the 3R program by granting exceptions to new construction standards on a project-by-project basis.

FEDERAL-AID ROAD SYSTEMS

FHWA administers the federal-aid highway program of construction, preservation and improvement of 42,460 miles of Interstate and approximately 791,000 miles of primary, secondary and urban system roads, of which about 785,000 miles come under the 3R Pro-

[1] The Federal-Aid Highway Act of 1981 added a fourth R—reconstruction—to the 3R program which was not discussed at the subcommittee's hearings and is not addressed in this report. Reconstruction involves major widening, adding interchanges and removing and replacing roadway rather than preserving existing road surface.

gram (see Table 1). The primary system's 249,946 (non-interstate and non-freeway) miles are made up of major and rural arterial routes and their extensions in or through urban areas. The 401,999 mile secondary system originally consisted of "farm-to-market" roads, but over time the definition broadened to include all types of rural roads. This system carries shorter, more localized trips than arterials, funnelling local traffic to the main roads.[2] The urban system's 132,680 (non-interstate and non-freeway) miles include collector roads in urban areas and those major and minor arterials not part of another federal system.[3]

TABLE 1.—FEDERAL-AID HIGHWAY SYSTEM MILEAGE ROADS OTHER THAN INTERSTATES AND FREEWAYS

Functional classification	System type (in miles)			
	Primary	Secondary	Urban	Total
Rural:				
Principal arterial	80,013			80,013
Minor arterial	146,098			146,098
Major collector		401,999		401,999
Minor collector				
Total rural	226,111	401,999		628,110
Urban:				
Principal arterial	22,090		22,239	44,329
Minor arterial	1,745		59,068	60,813
Collector			51,373	51,373
Total urban	23,835		132,680	156,515
Total Federal-aid mileage (nonfreeway and non-interstate)	249,946	401,999	132,680	784,625

Source: Federal Highway Administration, U.S. Department of Transportation, *Highway Statistics*, 1982, Table HM–18 (mileage as of Dec. 31, 1982)

HIGHWAY DETERIORATION

Deteriorating pavement conditions have become a major concern. Ninety percent of primary and secondary roads will need resurfacing in the next 15 years.[4]

In the last 10 years, arterial and collector mileage in the "good" category, i.e., new or nearly new pavement, has been shrinking. Thousands of miles have been downgraded from good to "fair," with fair indicating some remaining degree of serviceability. Since pavement in fair condition deteriorates faster than pavement in good condition, accelerated levels of fair pavement maintenance are required just to keep the level of poor pavement constant.

DEFINING 3R

3R work is generally regarded as heavy, non-routine maintenance work, as contrasted to the light maintenance work of pothole repair and grass cutting.

3R resurfacing requires placement of additional pavement on existing roadway or bridge surfaces, providing additional strength

[2] Secretary of Transportation. "The Status of the Nation's Highways: Conditions and Performance." Washington, DC: U.S. Government Printing Office, 1981, pp. 8, 9.
[3] Ibid.
[4] Ibid., pp. 169, 172, 174.

and/or extending useful life. Restoration and rehabilitation work extends the performance of the existing road or bridge, or prepares it to accommodate an additional stage of construction, such as resurfacing. Adding underdrains and replacing contaminated or deteriorated materials are examples of restoration work. Rehabilitation entails improving shoulders and/or strengthening the road surface base.

3R FUNDING

Table 2 shows authorization levels for 3R projects for fiscal years 1976 through 1983. Additional demands for funds for 3R-type projects should be met by the 1982 Surface Transportation Assistance Act which increased highway funding and required States to spend at least 40 percent of their primary, secondary and urban system apportionments on 4R activities.

TABLE 2.—FEDERAL FUNDS AUTHORIZED FOR 3R PROJECTS ON PRIMARY AND SECONDARY HIGHWAYS

	Primary	Secondary	Total
Fiscal year 1976	$189,319,964	$76,066,413	$265,486,377
Transition Quarter	80,308,131	24,389,069	104,697,200
Fiscal year:			
1977 [1]	145,588,503	32,333,272	177,921,775
1978	NA	NA	NA
1979	306,981,305	256,702,891	563,184,196
1980	388,024,178	266,565,681	654,589,859
1981 [2]	326,836,566	118,111,841	444,948,407
1982 [3]	275,888,372	95,622,375	371,510,747
1983 [3]	91,522,932	41,742,929	133,265,861

[1] Figures include Oct. 1, 1976 through Mar. 30, 1977 only.
[2] Figures include Oct. 1, 1980 through July 31, 1981 only.
[3] Represents the mandatory 20 percent minimum to be used for 3R work.

Note: NA = Not available.

Source: FHWA response to a question asked by the subcommittee following the Sept. 17, 1981 hearing, subsequently updated for fiscal year 1982 and 1983.

STANDARDS AND SAFETY

Geometric design standards include criteria for design controls and design elements. Design controls, such as access control and design speed, relate to accommodating expected traffic volumes and vehicle types. Design elements include such critical factors as stopping and passing sight distance, horizontal and vertical curvature, "banking," shoulders, medians and roadsides.

Good geometric design is necessary for safe and efficient highways. Unfortunately, good geometric conditions are not present on many miles of highways. In a 1983 report to Congress, the U.S. Department of Transportation indicated that "* * * substantial segments of the rural collector system have substandard safety and geometric characteristics." [5] Over 45 percent of primary system mileage had geometric or cross-sectional deficiencies.[6]

[5] Secretary of Transportation. *The Status of the Nation's Highways: Conditions and Performance.* Washington, DC: U.S. Government Printing Office, 1983, p. 59.
[6] Ibid., p. 71.

The subcommittee was distressed to learn that as 3R has accounted for a greater share of State capital programs, the pace of improving geometry has slowed considerably.[7] This slowing trend can only exacerbate safety problems. Predicted increases in traffic volumes will compound the problem unless geometric conditions are upgraded.

Legislative History (1973–1981)

The Federal-Aid Highway Act of 1973 (P.L. 93–87) made a significant declaration of highway policy and expression of Congressional intent by adding to Title 23 U.S. Code the following:

> It is further declared that since the Interstate System is now in the final phase of completion it shall be the national policy that increased emphasis be placed on the construction and reconstruction of the other Federal-aid systems in accordance with the first paragraph of this subsection, in order to bring all of the Federal-aid systems up to standards and to increase the safety of these systems to the maximum extent.

The Federal-Aid Highway Act of 1976 (P.L. 94–280) redefined construction to include 3R activities. But the Act did not prescribe funding levels for 3R work, and it also failed to specify appropriate geometric design standards.

The Federal Aid Highway Act of 1978 (P.L. 95–599) was also silent on 3R design standards. It required that at least 20 percent of a State's federal-aid primary and secondary apportionment be dedicated to 3R projects for fiscal years 1979–1982.[8]

Regulatory History

Appropriate geometric design criteria for 3R projects became the subject of FHWA rulemaking action on August 25, 1977. The Advanced Notice of Proposed Rulemaking (ANPRM) on this date proposed three alternative applications of geometric design criteria for 3R projects: (1) Code of Federal Regulations criteria (23 CFR 625) for new construction or reconstruction, with provisions for individual project exceptions (status quo); (2) less stringent geometric design criteria developed by the American Association of State Highway and Transportation Officials (AASHTO) in "Geometric Design Guide for Resurfacing, Restoration and Rehabilitation (R-R-R) for Highways and Streets," (Purple Book); (3) the option for each State, in consultation with FHWA, to develop its 3R criteria, using the AASHTO Purple Book as a basis.

On January 19, 1978 FHWA withdrew the ANPRM, indicating "* * * severely adverse comments made on the specific criteria contained in the AASHTO Purple Book, precludes its adoption for use on Federal-aid projects. * * *"[9] In the interim, 23 CFR 625 with provision for exceptions would apply.

On August 23, 1978, a second proposed rulemaking was offered, containing FHWA's suggested design criteria for 3R projects. The criteria proposed were not as stringent as those for new construction and reconstruction work; however, they were more stringent

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[7] Ibid., p. 114.
[8] Surface Transportation Assistance Act of 1978, (P.L. 95–599), sec. 104(d).
[9] Federal Register, vol. 43, No. 13, Thursday, Jan. 19, 1978, p. 2735.

than the Purple Book standards rejected in the 1978 withdrawal notice.[10]

In response to critical comments to the second rulemaking proposal, FHWA established a Task Force on May 23, 1979, to develop a regulatory impact analysis, summarize and evaluate docket comments, and to develop 3R decision options for the Federal Highway Administrator.

On January 5, 1981, FHWA withdrew its 1978 proposal because a number of comments had raised issues concerning the proper federal role in the 3R program.

On the same day, a new NPRM was announced which would permit each State to establish its own 3R criteria, in consultation with its FHWA division administrator. The NPRM was supported by an FHWA technical report, "RRR Alternative Evaluations for Non-Interstate Rural Arterial and Collector Highway Systems," which evaluated the application of three cases of 3R geometric design standards at different funding levels. The technical report concluded that, under the assumption of limited highway funding, 3R criteria similar to FHWA's 1978 proposal or that were currently used in State practice (1979), would provide greater benefits nationally than using new construction standards without exceptions.[11]

The FHWA Task Force report that recommended the option upon which the final 3R rule was based, referred to the 3R program's impact on *improved safety*: "* * * the Task Force recommendation * * * is offered with the understanding that the effectiveness of RRR program implementation and impact on improved safety * * * be closely monitored." [12] The Task Force indicated that its recommendations gave "* * * full consideration to both safety and highway preservation objectives." [13]

Hearings

The failure of FHWA to address safety and design questions left unresolved by the 3R rulemaking process led this subcommittee to begin oversight hearings in September 1981. We were determined to assess FHWA's performance relative to Congressional intent. Testimony was presented by FHWA, the National Transportation Safety Board (NTSB), AASHTO, safety engineers, and other interest groups. Major topics included highway safety and the need for safety research, national standards with flexibility for state modification, the FHWA technical report, adequacy of FHWA oversight and Congressional intent.

HIGHWAY SAFETY

Hearing testimony heightened our concern with the role of safety in the 3R program. FHWA took the position that improved safety is achieved with less stringent 3R standards, thereby paving more miles of road with existing funds. The Center for Auto Safety and NTSB were strongly critical of the data and analyses in the

[10] Federal Register, vol. 43, No. 164, Wednesday, Aug. 23, 1978, pp. 37556-37568.
[11] Federal Register, vol. 46, No. 2, Monday, Jan. 5, 1981, p. 1229.
[12] Federal Highway Administration, Docket 80-3, "Design Standards for Highways," Docket Item 80-3/SI-59, attachment 2, p. 5.
[13] Ibid., attachment 4, p. 14.

FHWA technical report, which supported 3R standards less stringent than those required for new construction.

Testimony indicated that the highways where 3R work is carried out generally need geometric improvements that were not specifically required by the proposed FHWA rule. Safety engineers and safety organization representatives testified that improvements on such roads often require a once-and-for-all fixed roadside object removal, a lane, shoulder or bridge widening or a correction of curve alignment. They pointed out that repaving alone does not solve such problems on many roads; in fact, it could encourage increased speeds and associated accidents. Safety problems can be expected to compound as traffic volumes increase and the vehicle mix widens.

SAFETY RESEARCH

The hearings found that safety research was generally lacking to support FHWA's contention that reducing 3R standards does not affect safety. The safety research used by FHWA and others could not be generalized to the national level. This lack of research was acknowledged in a 1981 report to Congress from the U.S. Secretary of Transportation which pointed out that in previous safety studies, "* * * little effort has been made to correlate safety and other design parameters and physical operating conditions." [14]

Witnesses expressed concern that FHWA's final rule fails to require the States to collect, analyze, and report accident data associated with design standards; thus FHWA and the Congress would not have information in the future on the safety effects of design standards. (The subcommittee's deliberations regarding this lack of safety research led to a provision in the 1982 STAA requiring the National Academy of Sciences to conduct a study which would determine the most appropriate minimum design standards.)

NATIONAL VERSUS STATE STANDARDS

Witnesses at the hearings differed as to whether there should be a national standard for 3R or whether each State should develop its own standards. AASHTO provided a 42-State summary showing that 11 States preferred a national standard, 21 a State standard, and 10 a continuation of current (1981) project exemptions from new construction standards, essentially a national standard choice. However, AASHTO President John Clements and the accompanying State representatives generally favored national standards, using the Purple Book to set minimum standards and employing FHWA/State consultations to achieve improvements above the minimum. Several State representatives indicated that a national standard is needed to ensure consistency across States, to permit overall 3R accountability and to streamline paperwork associated with the current exemption process.

NTSB made a strong pitch for national standards based on improved research on the relationships between design standards and safety. FHWA, which had originally advocated national standards during the rulemaking process, reversed itself and proposed individual State 3R standards. This proposed reversal concerned this

[14] Secretary of Transportation, 1981, p. 105.

subcommittee and was a factor in our decision to hold these hearings.

FHWA TECHNICAL REPORT

The Chairman of the NTSB criticized the FHWA technical report as "distorted and misleading" and maintained that its major conclusion—that lower standards will achieve greater overall safety benefits—remains "undemonstrated and unsupported." Mr. King further testifed that for the low-standards approach costs are understated and safety benefits overstated, whereas for the high-standards approach costs are overstated and safety benefits understated; thus the technical report results are biased in favor of the low standards approach.

Witnesses at the hearings supported several NTSB criticisms, such as the lack of adequate research data to support the analysis and the questionable assumption of a 16-year pavement life after resurfacing. (A 10-year life was believed more applicable by State engineers.)

FHWA rebutted these criticisms, maintaining in part that changes in assumptions and data do not negate the report's conclusions. FHWA officials fully supported the report and its conclusions in our hearings.

Chairman Levitas raised the question of a possible assessment of the FHWA study by an independent agency. Mr. King responded that a comprehensive study by an independent party such as the General Accounting Office (GAO) might prove useful.

OVERSIGHT

The NTSB and the Center for Auto Safety criticized FHWA's management and oversight of 3R. NTSB testified that FHWA was unable to document current 3R practices, including the basis for granting exceptions to States and the impact of exceptions on highway safety, cost and durability.

Chairman Levitas summarized Congressional oversight responsibilities in the following terms:

> As I view the congressional responsibility in this area, it has several components. The first is to be concerned about the safety factors involved and the societal costs resulting from accidents, fatalities, and injuries. The second is a realistic recognition that there are not unlimited funds available and that these funds must be made to go as far as possible to get the most benefit for the taxpayers' dollars expended; third, that there is a congressional mandate and reshifting of priorities to an improvement of the system, rather than the expansion of the system through new roads, and that is why emphasis is being placed on the 3R program; fourth, that the 3R program clearly is one which requires flexibility, and I want to emphasize * * * flexibility, because the needs of different States and different regions are quite varied, and to put a rigid national Federal program is not either the best way or even the most cost-effective way to proceed * * * all of these are linked together in my mind—how can we, as the stewards of the public tax dollar make realistic, cost-effective judgments about how much money the Federal Government ought to be appropriating for these purposes and how that money is being spent and spent wisely? How can we do that in terms of the proposed rulemaking?[15]

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[15] Hearings before the Subcommittee on Investigations and Oversight of the Committee on Public Works and Transportation, 97th Congress, 1st session, "Resurfacing, Restoration and Rehabilitation (3R) of Roads Other Than Freeways," Sept. 17, Oct. 27, 28, Dec. 15, 1981, (Washington, DC) printed as one volume (Committee Document 97-75) herein referred to as "Hearings," p. 164.

FHWA did not provide this subcommittee with sufficient assurance in the hearings that it will provide the information needed to meet these oversight responsibilities. To this end, we shall continue to closely monitor FHWA activity in this program.

POST-HEARING DEVELOPMENTS

The oversight hearings highlighted the subcommittee's disagreement with FHWA's proposed 3R rule and policy direction.

FINAL RULE

Chairman Levitas, in a letter of March 16, 1982, and again on May 26, 1982, in a letter cosigned by Ranking Minority Member Barry Goldwater, Jr., asked FHWA to delay issuance of a final rule pending NTSB's analysis of FHWA's response to criticism of its technical report. FHWA ignored the subcommittee's request, and promulgated the final rule on June 10, 1982—the day before its response was sent to NTSB.

In the final rule, essentially identical to the January 5, 1981 proposed rule, FHWA contradicted Congressional intent and its own commitment to a national 3R standard by permitting each State to establish its own 3R criteria with safety being a secondary or optional objective.

During the hearings, Chairman Levitas had articulated the subcommittee's concern for considering highway safety in the final rule:

> As I pointed out on the first day of hearings, increasing cost and decreasing receipts to the highway trust fund have heightened the States' concern for making highway dollars go as far as possible. Congress, however, wants to be sure that safety is not neglected in the process. We want to be certain that whatever action is taken on this rulemaking, it is consistent with the intent of Congress and reflects our concern for efficient use of public money and traffic safety.[16]

1982 SURFACE TRANSPORTATION ASSISTANCE ACT [STAA]

Congress responded to FHWA's defiance of Congressional intent by incorporating the subcommittee's position on enhancement of safety into section 110 of the 1982 STAA:

> * * * [3R projects] shall be constructed in accordance with standards to preserve and extend the service life of highways and enhance highway safety.[17]

The 1982 STAA also doubled the required percentage spending level on 3R projects from 20 percent to 40 percent of the apportionments for primary and secondary systems, and added the urban system apportionment.[18] Reflecting the subcommittee's concern with safety, the Act directed the national Academy of Sciences to undertake a study of the safety cost-effectiveness of geometric design criteria, and to determine the most appropriate minimum standards for 3R projects. The study and proposed standards will be submitted to the Secretary of Transportation and then to Congress for consideration.[19]

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[16] Hearings, p. 399.
[17] Surface Transportation Assistance Act of 1982, (P.L. 97-434), 110.
[18] Ibid., sec. 105(d).
[19] Ibid., sec. 110.

GENERAL ACCOUNTING OFFICE [GAO] STUDY

On May 26, 1982, Chairman Levitas requested GAO to examine one of the major questions that arose during subcommittee hearings: What effects do exceptions to 3R standards have on safety?

Testimony at the hearings revealed that most States had exception practice agreements with FHWA. GAO was asked to find out how these agreements varied from State to State, and to review how 3R funds were being used by the States.

GAO submitted two reports,[20, 21] on December 23, 1983 and February 29, 1984, finding that:

1. The safety effects of specific exceptions to 3R standards are unknown and will remain so until further data are developed;
2. FHWA's review of safety implications varied among its State offices. GAO recommended that FHWA develop uniform review procedures; and
3. In the six States surveyed, 59 percent of non-interstate 3R funds obligated were used for resurfacing.

ASSESSMENT OF FHWA PERFORMANCE

FHWA's rulemaking has failed to reflect Congressional intent for developing 3R standards that enhance highway safety. The agency's oversight and management have been inconsistent and ineffective in implementing the 3R Program.

FAILURE TO REFLECT CONGRESSIONAL INTENT

The Congress has indicated its intent to require 3R standards having safety as a prime objective. In fact, even before the 3R program was established, Congress, in the 1973 Federal-Aid Highway Act mandated bringing "* * * all of the Federal-aid systems up to standards and increasing the safety of these systems to the maximum extent."

Despite this and other statements of Congressional intent, FHWA's preamble to the final rule stated that: "Improvements for safety, capacity or any other purpose are a secondary and often optional objective of RRR." FHWA's technical report referred to 3R in terms other than safety: "* * * the objective of the RRR program [is] to restore pavement over as much of the two-lane rural highway system as possible."

The FHWA final rule not only contradicted Congressional intent, it also contradicted FHWA's previous position for enhancing safety:

FHWA's rulemaking statements of 1977, 1978, 1979, and 1980 referred to improving safety with 3R work;

FHWA's Highway Program Standard Number 12 required all States to have a program of highway design, construction and maintenance to improve highway safety.[22]

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[20] U.S. General Accounting Office, "The Department of Transportation's Program to Preserve the Highways: Safety Remains an Issue," Washington, DC, 1983, RCED-84-69.

[21] U.S. General Accounting Office, "Types of Work Performed Using Resurfacing, Restoration, Rehabilitation, and Reconstruction Federal Highway Funds," Washington, DC, 1984, RCED-84-83.

[22] 23 CFR 1204.4, Highway Safety Program Standard No. 12, Part IH.

> One of FHWA's 3R Task Force reports stated "* * * 3R was intended to improve safety by repairing deteriorating highways.[23]
>
> Administrator Barnhart testified at subcommittee hearings that FHWA has "* * * not made compromises to allow something to be constructed that would be a departure from a precedent in order to save a dollar at the expense of a safety factor.[24]

These statements support the requirement that safety be enhanced by 3R projects and not be viewed as a secondary or optional objective, as in the preamble to the final rule.

The 1982 STAA specified that 3R projects "* * * shall be constructed in accordance with standards to preserve and extend the service life of highways and enhance highway safety." In March of 1983, FHWA amended the final rule to reflect this provision.

STATE STANDARDS PROMULGATED, MINIMUM NATIONAL STANDARDS NEEDED

The final rule on 3R permits States to adopt design criteria less stringent than were used prior to the new 3R rule. Federal sanction of lower standards for 3R has occurred even though FHWA has acknowledged that insufficient research exists on the relationship between design and safety to justify such a move.

The concept of national standards for 3R projects was part of FHWA's rulemaking effort when it began in 1977.[25] On the initial docket, 95 percent of State agencies and 90 percent of all respondents supported options requiring a national 3R standard.[26]

During the hearings, Chairman Levitas expressed concern as to how FHWA and Congress would be able to forecast future 3R needs and measure accomplishments:

> In the absence of some criteria and some method of determining when those criteria are being met there would really be no way for you (FHWA) or Congress to determine what are the adequate funding levels for the 3R program, whether they will meet the future needs of this national program and whether or not the goals of the 3R program, the national goals, are being met.[27]

The subcommittee supports the concept of a national 3R standard contrary to the final rule. However, national standards should have sufficient flexibility to allow for the unique needs of each State and locality.

INSUFFICIENT RESEARCH TO SUPPORT 3R RULE

Although FHWA has not conducted satisfactory safety research as part of its rulemaking process, there is evidence to indicate that safety is adversely affected if standards are reduced. We are asked to believe that the new 3R rule will not diminish highway safety: the FHWA technical report does not resolve this issue.

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[23] Federal Highway Administration, Docket 80-3, "Design Standards for Highways," Docket Item 80-3/SI-59, attachment 2, p. 5.
[24] Hearings, p. 50.
[25] Federal Register, vol. 47, No. 165, Thursday, Aug. 25, 1977, p. 42876.
[26] Federal Highway Administration Docket 77-4, "Design Standards for Highways," Summary of Comments, p. 3.
[27] Hearings, p. 394.

INEFFECTIVE FHWA ADMINISTRATION

As the federal steward of the 3R program, FHWA has full responsibility for achieving its objectives in an efficient manner. This responsibility entails establishing specific objectives, planning to meet objectives, administering the program effectively and efficiently, monitoring to ensure that States carry out activities consistent with federal objectives, conducting research to measure the effect of standards on safety, and keeping Congress fully informed. We have no intention of allowing these responsibilities to be abrogated by FHWA.

FHWA's commitment to effectively monitor the 3R program is questionable at best. FHWA has sought, without success, to reduce its current level of monitoring by proposing to Congress that the requirement for final inspection of 3R projects be dropped under the Certification Acceptance Program. In the final rule, FHWA stated that "federally funded RRR work will be monitored in the same manner as other federal-aid work within each State." This implies that its level of 3R monitoring will not increase despite the obvious need created by a variety of State 3R standards.

Hearing testimony from NTSB also indicates inadequate FHWA monitoring. NTSB requested descriptive information on 3R activities in the States, including the basis for granting project exceptions, but FHWA failed to provide it. The collection and use of such data should be an important part of FHWA's management process.

This subcommittee is concerned that the oversight activities of FHWA—and the Congress—will be seriously impaired if FHWA fails to improve its program administration.

Conclusions and Recommendations

While the subcommittee understands the need to make highway dollars go as far as possible, it cannot encourage highway preservation at the potential cost of highway safety. Congress' intent is for these goals to be compatible rather than conflicting.

We recognize the uniqueness of each State and locality, and fully support the application of flexibility to 3R standards. However, such flexibility should be negotiated from a base level of national 3R design standards to ensure safety.

We have concluded that FHWA's management of the 3R program has been less than satisfactory. The agency has been unable to adequately assess the cost-effectiveness of 3R alternatives. Adoption of the final rule requires a considerable increase in monitoring responsibility which FHWA has failed to address.

Based on these conclusions, and other findings in this report, the subcommittee offers the following recommendations:

1. Federal stewardship over the 3R program should be strengthened.

The subcommittee believes that additional monitoring and oversight is necessary to ensure effective 3R program implementation.

Congress is appropriating substantial funding for highway preservation work from the Highway Trust Fund. There are not unlimited funds available and Congress, held accountable by the taxpayers, must be assured that expenditures reflect Congressional policy. Chairman Levitas spoke to this issue during the hearings:

Our assessment of the 3R proposal should not be interpreted to reflect a lack of confidence in the States. Rather, it is an attempt to answer the question of how Congress, which appropriates these tax funds, would have sufficient assurance that these funds would be spent in response to Congressional policy.[28]

A closely monitored 3R program is essential; it must provide an accurate estimate of future program revenue needs and ensure that an attempt to provide States with greater flexibility in the use of these funds has not resulted in replacing one piece of "red tape" with fifty pieces.

2. FHWA should implement appropriate minimum standards to apply to federal 3R projects.

Federal guidance as to appropriate standards for 3R work is desirable and necessary to effectively administer the 3R program. The subcommittee believes that FHWA rulemaking efforts to develop geometric design criteria indicate that there is basis to develop appropriate criteria. To this end, the Congress, in the 1982 STAA, has directed the Secretary of Transportation, in conjunction with the National Academy of Sciences, to conduct a study of the safety cost-effectiveness of geometric design criteria to determine the most appropriate minimum standards for 3R projects.

3. The FHWA technical report used to develop the 3R rule must be evaluated for the accuracy of its methodology and conclusions. Controversy concerning the validity of the report could be settled through an evaluation by an independent federal agency or incorporated into the National Academy of Sciences' study now under way.

4. Additional oversight hearings should be held to monitor the implementation of the 3R program under the new rulemaking to ensure that full consideration is given to both safety and highway preservation objectives in response to Congressional intent.

The subcommittee's oversight role with regard to the 3R program has continued since the 3R rulemaking in 1982. The General Accounting Office's two reports support the need for additional hearings.

Congress established the 3R program, a significant departure from traditional highway policy, in response to a critical need to preserve the cornerstone of our Nation's infrastructure—the highway system. A program of this magnitude and import cannot be too carefully monitored as to its direction and effectiveness.

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[28] Hearings, p. 375.